



U.S. Department of Energy
Energy Efficiency and Renewable Energy

NREL/CD-520-33586 Page 103

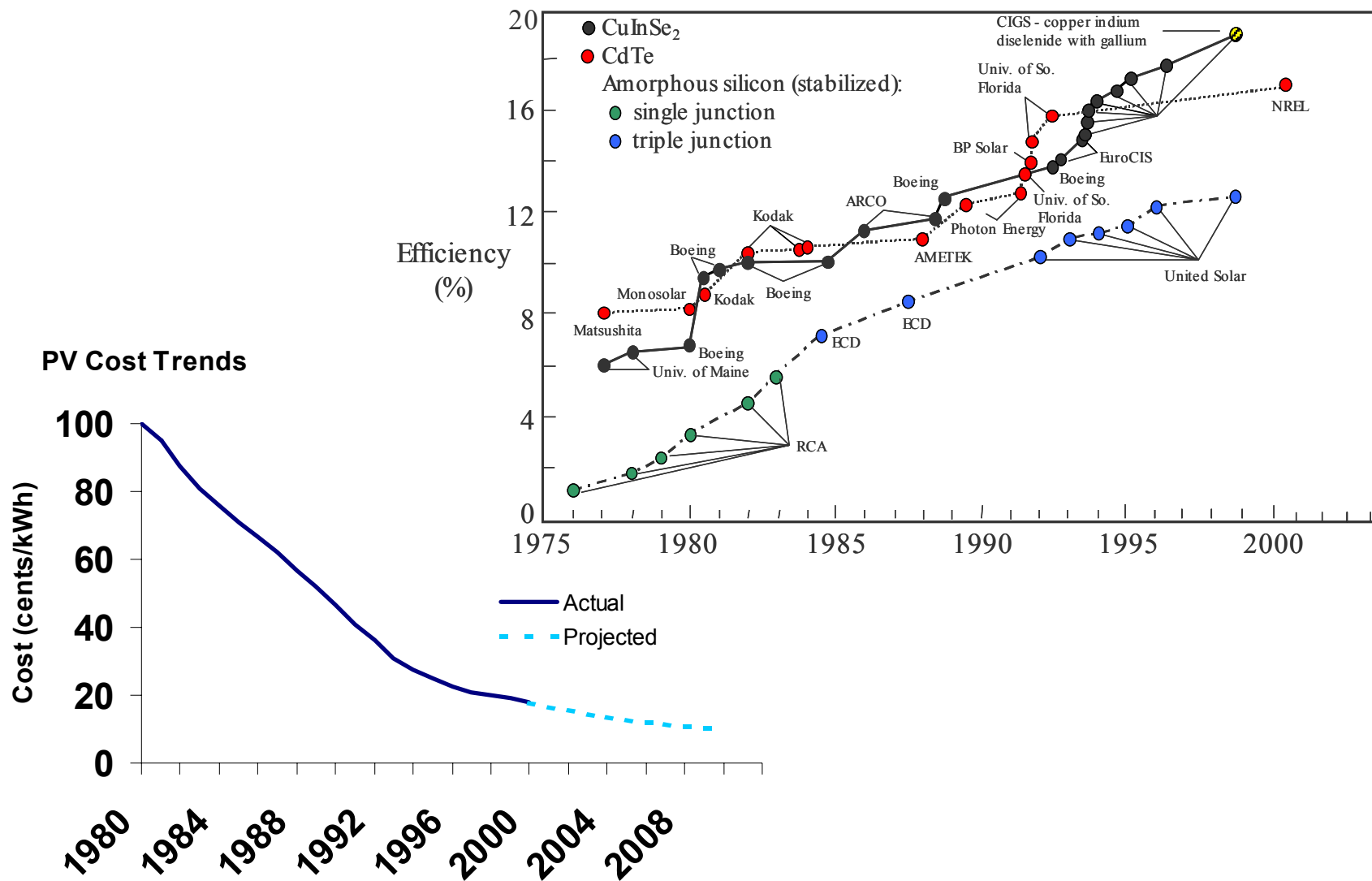
The DOE Solar Program: Photovoltaics

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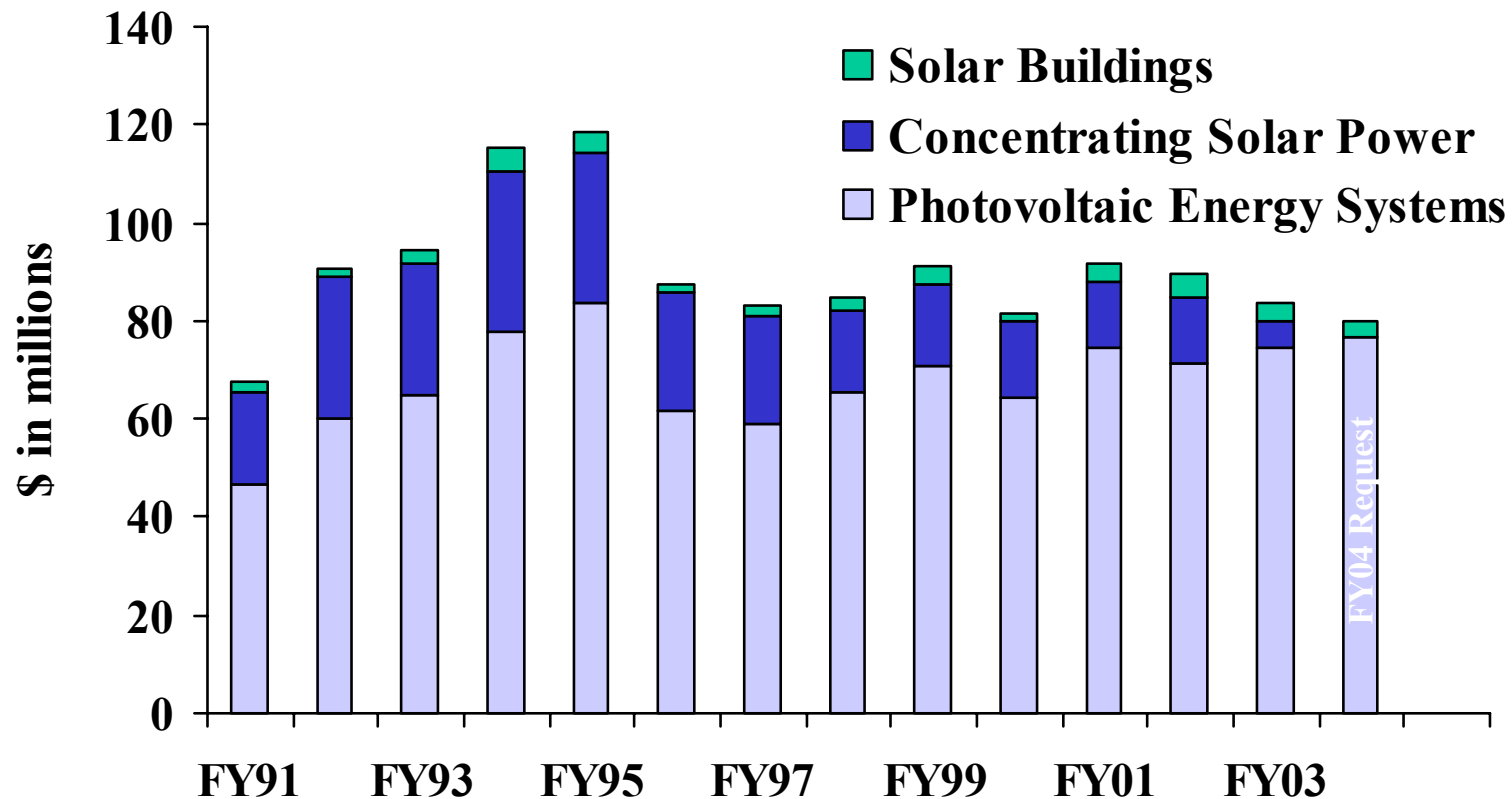


Cost and Performance





Solar Budget Trend



	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04 Req.
Concentrating Solar Power	19.2	28.8	26.9	32.7	30.3	24.2	21.9	16.5	16.8	15.2	13.6	13.2	5.298	0
Photovoltaic Energy Systems	46.4	60	64.8	78	83.8	61.5	59.2	65.5	70.6	64.6	74.3	71.55	74.661	76.69
Solar Buildings	2	2	2.9	4.8	4.6	1.9	2.2	2.7	3.6	1.97	3.87	4.79	3.853	3



FY03 Solar Appropriation

\$77,500,000

Photovoltaics

\$12,000,000

Solar Buildings (hot water & ZEB)

\$ 5,500,000

Concentrating Solar Power (CSP)

\$95,000,000

\$ 8,000,000

goes to the Building Technology
Program to manage

\$87,000,000



FY03 Solar Adjustments

\$95,000,000

- 3,480,000 General Reductions/Homeland Security

\$91,520,000

- 7,708,000 ZEB in Buildings Program

\$83,812,000



FY03 Solar Adjustments

\$74,661,000	Photovoltaics
\$ 3,853,000	Solar Water & Space Heating
<u>\$ 5,298,000</u>	Concentrating Solar Power (CSP)
\$83,812,000	

\$74,661,000	Photovoltaics
- <u>\$10,715,000</u>	Earmarks
\$63,946,000	



Earmarks FY00-FY03

	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>
Office of Science	2,847	2,847		
Southeast and Southwest RES	2,000	1,500	2,000	2,500
Partnerships for Tech Intro	500			
MSRI	1,500	3,000	2,600	2,600
Palo Alto photovoltaic demonstration proj				1,500
Hard Bargain Farm Environmental Center, MD				115
Navajo Electrification Project			3,000	2,500
Dev of advanced integrated power modules				1,500
1MW and 25kW Dish Deployment			5,000	
1,000 MW Study				0
NV Renewable Resource Assistance			4,000	0
Total	6,847	7,347	16,600	10,715



FY03 Budget, FY04 Request

Activity	FY03 Enacted	FY04 Request
PV Fundamental Research	25.0M	30.4M
PV Advanced Materials & Devices	27.0M	29.8M
PV Technology Development	12.0M	16.5M
PV Total	64.0M	76.7M
Concentrating Solar Power	5.3M	0
Solar Heating & Lighting	3.8M	3M
Earmarks (MSR, RESs, Palo Alto, Navajo, inverters, Hard Bargain Farm)	10.7M	
Program Total	83.8M	79.7M



FY03 Budget, FY04 Request

Activity	FY03 Enacted	FY04 Request
PV Fundamental Research	25.0M	30.4M
PV Advanced Materials & Devices	27.0M	29.8M
PV Technology Development	12.0M	16.5M
PV Total	64.0M	76.7M
Concentrating Solar Power	5.3M	0
Solar Heating & Lighting	3.8M	3.0M
Earmarks (MSR, RESs, Palo Alto, Navajo, inverters, Hard Bargain Farm)	10.7M	
Program Total	83.8M	79.7M



Shelter

Heat & Hot Water

Food (cooking & refrigeration)

Clothes (manufacturing)

Transportation

Communications (electronics)



Sunlight is a complete source of energy

Food

Oxygen

Heat

Electricity

Fuel (stored chemical energy)



Washington
Monument
555 ft. high

756 x 756 x 756 ft.

788 x 788 x 788 ft.

World Daily Volume of Fossil Fuel Use - Cubic Feet



World Daily Volume of Natural Gas Use - Cubic Feet

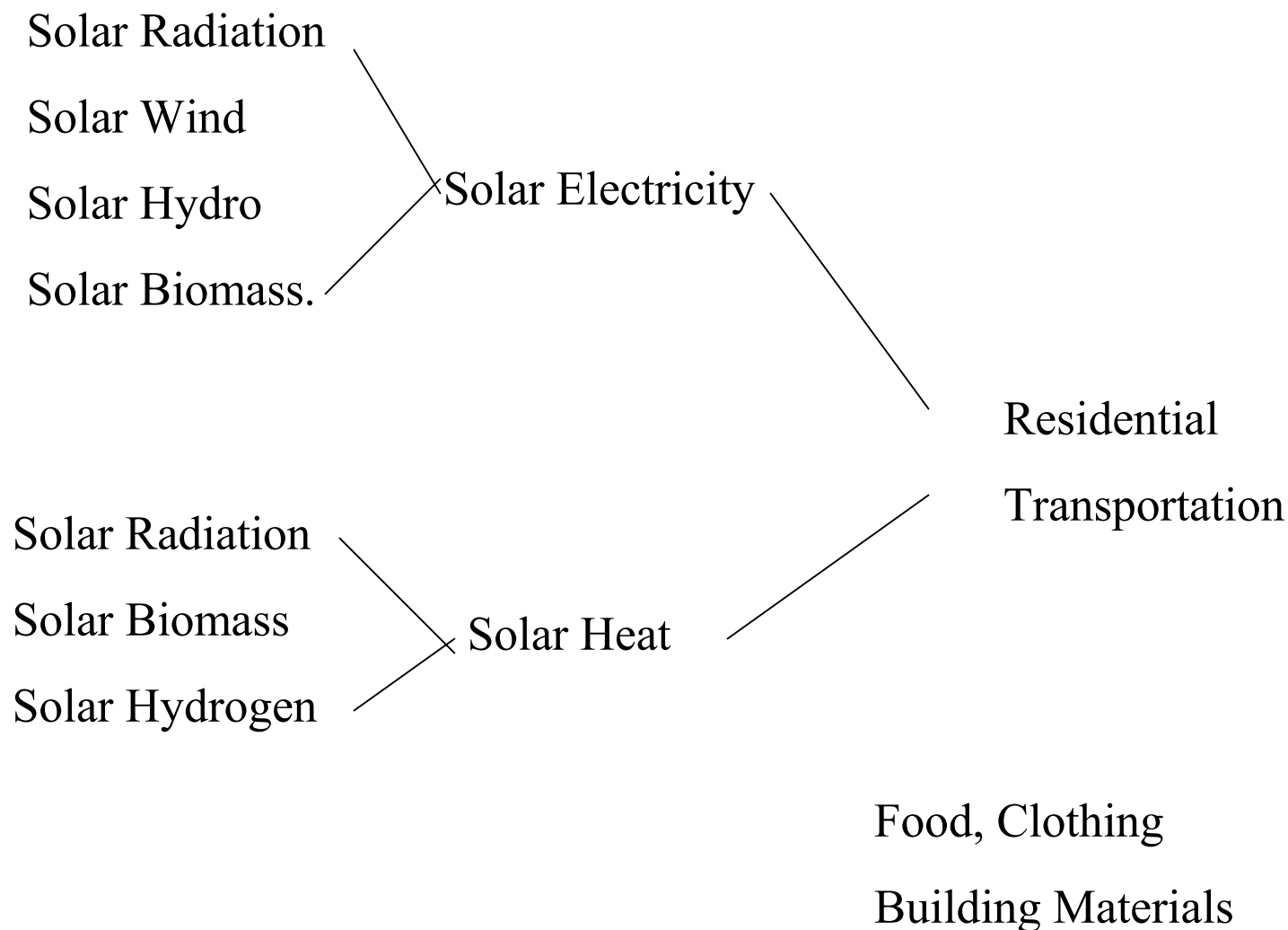


Finite Resource:

Growth in consumption is detrimental to our well being

Renewable Resource:

Growth is good





Vision

A future where solar energy provides everyone's daily use of energy.